

GEORGE W. YORK, Editor.

AMERICAN BEE JOURNAL.

ESTABLISHED IN 1861 OLDEST BEE-PAPER IN AMERICA
DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS.

39th YEAR.

CHICAGO, ILL., MARCH 9, 1899.

No. 10.

CONTRIBUTED ARTICLES

Influence of Locality on Bee-Management.

BY ADRIAN GETAZ.

THIS title sounds somewhat like a joke. A few years ago, when something happened that was not fully understood, it was customary to attribute it to the "strain of bees;" later on, the accusation was made against the "locality." Nevertheless, it is true that the locality, or rather the climate, the length and character of the honey-flow, and several other circumstances, including the methods of management and the awkwardness of the keeper, play an important part in the results obtained.

WINTERING BEES.

Among the periodical articles that appear regularly every year or so in the different bee-papers, is one by Mr. Doolittle, to the effect that the bees dying in small groups outside of the main cluster, during the winter, are old bees which went off for the purpose of dying. This statement has often been denied, and many have said that the bees thus found were those unable to reach the main cluster in time, and simply died of cold.

My own experience is in accordance with this last point of view. I frequently find small clusters of bees between the outside combs, that have evidently died of cold because the main cluster beyond has receded and thus withdrawn its warmth. Or, sometimes they have eaten what honey was around them, and on account of a too low temperature failed to go around the combs and reach another part of the cluster or of the honey.

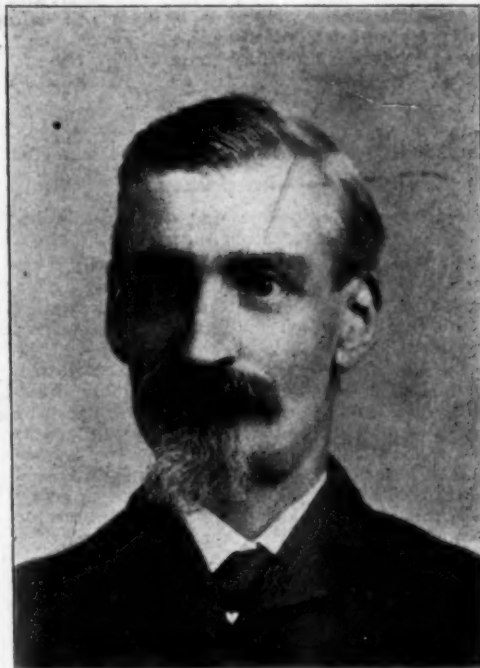
Mr. Doolittle is a very careful observer, and his statements are always correct, or practically so. In this case the difference of opinion can very easily be accounted for. Doolittle winters his bees in a cellar, or rather a repository, in which the temperature remains at about 40 degrees during the whole winter. The inside of the hives outside of the cluster must be higher by a few degrees. Under such circumstances (shall I say "locality?") I think those of the bees that may be separated from the main cluster, or get out of stores, can crawl around the combs and reach a better place.

In my "locality" the case is altogether different. I winter my bees outside. The climate during the winter is very variable. To-day the bees may fly freely. A cold wave comes, and in 24 or 36 hours the mercury may drop away below the freezing-point, if not below zero. What are the consequences? During the warm days the cluster of bees expands considerably, they fly out freely, and when the night comes they occupy the spaces between several combs. When the cold comes, the different parts of the cluster contract, and those numerous enough can keep

warm easily, but the smaller portions between the outside combs cannot, and before long the weather is too cold to permit them to go around the combs and rejoin the main cluster. I think that some passage-ways through the combs would help them greatly in such cases, and I am going this year to try some arrangement of that sort.

STIMULATIVE FEEDING OF BEES.

This is another of Mr. Doolittle's periodical subjects. He objects to it. And let me say here that on this point Doolittle has often been misunderstood, or misquoted. Many times it has been said that Doolittle is not in favor of feeding. That's wrong. Doolittle says positively that unless there is plenty of stores in the hive, the bees will not breed freely, and if there is not plenty all the time, feeding



Adrian Getaz.

must be done. He calls plenty the equivalent of two combs of honey.

What Mr. Doolittle objects to is the feeding of a small quantity of honey every day, or every night for the purpose of stimulating brood-rearing. On the other hand, quite a number of our best honey-producers practice successfully that kind of feeding.

This is a question not of "locality" but of manage-

ment. Mr. Doolittle practices what is called "spreading the brood-nest." That is, every few days he goes over his colonies, takes the center combs, which are full of brood, to the outside, and those that have but little brood he puts in the center. In doing this, he compels his bees to rear all the brood that they can take care of. Under such circumstances, stimulative feeding could not add anything to the amount of brood reared.

The others obtain the same result by stimulative feeding, and if they were to add brood-spreading to it, they would probably find no advantage in it. It is simply a choice between the two methods.

SPACE FOR QUEENS.

Some time ago Mr. Dadant said that one reason for having a pretty good sized brood-nest is, that if the queen has only a few combs she may have to go over a good deal to hunt up the empty cells, and therefore lose quite an amount of time, while with plenty of comb space there will always be some cells within reach. To which Mr. Doolittle retorted that his queens didn't have to hunt up space to lay in. Whether their queens spend much time in hunting up space or not is evidently a matter of "guess-work." As both "guessers" are experienced bee-keepers, their "guesses" must be pretty near the truth. And here Doolittle's brood-spreading explains the difference in their opinions, for by it he gives his queens plenty of space to lay, and at the best place, that is, the center of the brood-nest.

THE TWO-STORY BROOD-NEST.

On commenting on the subject of a two-story brood-nest, Mr. Hutchinson suggests that it might be as well to add one or two supers to the first story instead of a second brood-nest story. This is unquestionably a question of "locality." If I understand rightly, E. R. Root wants to add the second story at a time when the honey gathered is dark and comes in moderate quantity, and replace it by supers only when the more abundant flow of white honey comes, preferring to turn the dark honey into bees. These bees are to gather the white honey which follows.

If the honey-flow is of short duration, I should think better to put on supers at once than to rear bees that would be too late to help during the flow. In "my locality" the flow is never very heavy, and is very irregular, and the only way I can obtain some surplus is to keep the colonies very strong throughout the whole season, so they can take advantage of whatever flow may come at any time.

Knox Co., Tenn.

Securing a Foul Brood Law in Illinois.

BY J. M. HAMBAUGH.

I AM really gratified to see our old friends in "Suckerdom" taking such aggressive and bold steps for the obtaining of a foul brood law in that State.

Mr. Stone, as you know, is an old "wheelhorse," and always ready for battle, and many a tilt have we had in defense of the bee-keepers' interests in the days of "Auld Lang Syne."

As for Mr. Dadant, every blow that he administers is a "sledge-hammer blow," and now that he has appeared above board in the aggressive vindication of the foul brood law, we shall expect good results to emanate therefrom. And now, fellow bee-keepers of my native State, wouldn't it be a grand idea for you to bring proper influences to bear that would elevate Mr. Dadant to the dignity of a "Member of the Illinois General Assembly?" You would have a powerful exponent of your rights and privileges in the law-making machinery of the State. With such a member (if he is a Frenchman) to entrust to his keeping such a measure as the foul brood law as now proposed, you could rest assured that his keen foresight would quickly map out the ways and means by which to bring about the necessary votes and support of the Bill to enact it into law. He would reason like this:

Never can this proposed measure be gotten upon the statute books without the necessary number of members in both branches of the legislature to approve of the Bill, and the governor to sign it; and in order, first, to bring this about, the members must first be convinced that there is some true merits in the Bill.

Secondly, that it is really and absolutely wanted by their constituency.

Thirdly, that it will ultimately achieve the ends at which it is aimed.

And now, in order to bring this about, he must bear in mind the old adage, "Eternal vigilance is the price of success." He must know also that there is work to do. He must not only have a strong representative lobby before the committees of the two houses, but from all parts of the State must come strong appeals from the constituent bee-keepers, to the various members composing these committees, to vote favorably on the measure. The more cudgels that can be wielded over the heads of members by their constituents, the better; and remember, that a favorable consideration of a Bill before the committee is equivalent to one-half the battle.

After the Bill is favorably considered, see after the measure closely that it is not pushed to the rear and "pigeon-holed," but promptly brought to its place on the calendar.

And now is the time for the importuning of the members for a favorable consideration, with all the force that can be brought to bear, from every bee-keeper that can be mustered into service, in the way of writing to their representatives and senators, and sending petitions, etc., in behalf of the measure, and see to it that a strong, vigilant vanguard is ever on deck to throttle opposition in whatever way it may present itself, by counter active arguments and work from its advocates and the opponents' constituency.

And now, fellow bee-keepers, if you are in earnest and need the law, it is your duty to work for the same. I appreciate Mr. Stone's energy and grit. I know him of old, but it is not within the province of any one man to convince a whole legislative body of men to enact a law, where there is no approval at his back from the people who are directly interested, and a legislator is quick to note this point.

Now, as neither Mr. Dadant nor Mr. Stone are members of that "disreputable" body, you must secure the services of the next best man you can get, and, let me beg of you, don't get one to introduce the Bill and then sit back and let the Bill take care of itself, as was done with a former foul brood bill, which I have a recollection of. It was a case of "The father of the Bill didn't father it."

San Diego Co., Calif.

[No doubt Mr. Hambaugh's advice is most excellent, whether it be Illinois, Michigan, or any other State that is attempting to secure a foul brood law. Mr. H. ought to know, for he was at one time a member of the Illinois legislature.—EDITOR.]

A Prayer for the Night-Time.

BY HON. EUGENE SECOR.

O cover my senses, thou Giver of sleep,
With the night of Forgetfulness over;
May slumber be restful, and trustful, and deep,
Till daylight return, daily rover.

The morning will break on a world of unrest;
For me there'll be duty or labor;
May the strength which I gather while Day's in the West,
Be spent as for God and my neighbor.

Forest City, Iowa.

No. 2.—Doolittle's Talk on Bees at a Farmer's Institute in New York State.

BY REPORTER.

[Continued from page 133.]

HE next spoke on honey, told how it was of two kinds, comb and extracted. How extracted was different from the "strained" honey of former times, explaining fully all about how extracting was done, and told in a story-like way how his old mother used to strain honey 50 years ago. Then how honey was the purest sweet in the world, most easily digested, etc., and yet, strange to say, hardly one person in three, as nearly as could be ascertained, ever tasted honey.

He next told how those eating honey never stooped to think of the very nice mechanism of the comb, which is so thin that it takes nearly or quite a thousand thicknesses of it to make an inch; how the six sides of one cell formed one side to six other cells, and the three angling bases of each cell form one-third the base to three other cells. Then how the bees, by their antennae, told in the dark just how to shape their cells, each bee having a rule and a square of its own; how the hexagon form gave the greatest strength with the least waste of space and material, illustrating it with square and round circles, and how the wax was secreted

by the bees consuming honey, the same as the fat of any animal was produced by consuming large quantities of food. How the wax exuded in scales from under the segments on the under side of the abdomen, and how it was taken from there with the feet of the bee and carried to the mouth, illustrating how it was manipulated into comb.

He then told how Huber, the blind bee-keeper of the past, ascertained that it took 20 pounds of honey to produce one pound of wax, and yet with this knowledge, thousands of pounds of wax in comb form was allowed to go to waste in the land, or to be worse than wasted, by breeding hundreds and thousands of the wax-moth to go about to injure the bees of the one who was careful that no bit of comb was allowed to lie about to breed these pests. And yet these wasters thought they knew as much about bee-keeping as anybody, and could not be coaxed to take a bee-paper that their understanding might be enlightened. He said it reminded him of a certain poor church that wanted new hymn-books.

A certain church needed hymn-books badly, but felt too poor to buy them. At last they instructed their clerk to write to certain houses to ascertain the price at which 50 hymn-books could be purchased, and adjourned the meeting two weeks to hear the replies.

When the time came, the clerk read the prices of the different houses, all but one of which wanted \$25 for the 50 books, or 50 cents each. But the exception read, that, if the church did not object to a few advertisements being in the hymn-books, the house would furnish them at 5 cents each, or \$2.50 for the lot. After due consultation, it was concluded that a few advertisements, as is often seen on the covers of our Sunday-school lesson helps, would do no special harm, so the clerk was authorized to procure the books.

It so happened that Christmas of that year came on Sunday, and the books arrived late Saturday night. The sexton hurriedly distributed them among the pews without taking time to look at them, and the preacher, having his own, or one of the 50-cent books, read the first lines of the hymn beginning,

"Hark, the herald angels sing,
Glory to the new born king"—

explaining that the same would be very appropriate to Christmas morning, when he sat down.

The organist played the prelude, but imagine the surprise and chagrin of that congregation when they found themselves singing—

"Hark, the herald angels sing,
Beecham's pills are just the thing,
Always sure and very mild,
Two for man and one for child."

Here the audience went into uproarious laughter and applause. As soon as a little calm could be restored, Mr. Doolittle said, "And just so with the man who allows wax to go to waste, but is too poor or stingy to take a bee-paper; he really thinks he is singing the praises of God and practical bee-keeping, when he is only singing for Beecham's pills, to the disadvantage of Godliness, himself and his neighbors."

It soon appeared to me that Doolittle had now reached the part of his theme which he had especially come for. I had wondered that he, only just up from a sick bed, had driven 13 miles over rough roads, and in the cold, to talk to only about 11 persons who were at this time keeping bees, and about 14 others who had at some time in their lives kept bees. How these numbers were ascertained, Mr. D. had taken an expression of the audience soon after he commenced to talk, by asking all who had bees at present to rise, and, when they were seated, ask all who had ever kept bees, but had none now, to rise, which showed the above result, or only about 25 persons out of an audience of nearly 300 or more who had ever been interested in bees to keep a single colony.

As soon as Mr. Doolittle had made the application of his hymn-book story, he continued by asking the farmers if they had ever thought that the bees were the very best friends *they* and the *fruit-growers* had? And without waiting for any reply he told them that such was the case, for very much that was raised on a farm could not be raised at all to perfection were it not for the agency performed by the bees and other insects, through their carrying the pollen on their bodies from one flower to another while in search of honey, from such flowers as are not capable of self-fertilization. *None* of the flowers which *secrete nectar* will ever bear fruit to any degree of perfection without the aid of the bees. And yet we find farmers all over the country who are jealous of the bees and their *keeper*, through their ignorance of the prime reason for which they were

created and placed upon the earth. Every farmer raising fruit, the clovers, buckwheat, or any member of the vine family, could well afford to pay the keeper of bees a reasonable sum for keeping them, rather than have the bees removed from their locality. Yet they usually growl about and malign their best friends, being jealous of the small compensation the bee-keeper secures from his bees, thinking the same in some mysterious way might have gotten into their pockets, had not the bees carried it off and put it into the pockets of their keeper.

God created the bee for the especial purpose of pollinization of flowers, and so placed nectar in the flowers, which need pollinizing, to attract the bee. And by and through nectar stored in the flowers and gathered by the bees, their wants are supplied, and they caused to live, so that in return they can fertilize more flowers; and so the flowers and the bees are mutual admirers, the one helping the other continuously, thus causing both to thrive and be happy. This was the sole purpose for which bees were created, but as they were like some farmers he knew of, a little greedy, they would store much more of the nectar than they needed to sustain life, when there was a plentiful secretion by the flowers, and through this trait of the bee there was often a surplus stored, or more than the bees needed that they might live. Taking advantage of this trait, man had come to understand how he could have a sweet "suitable for the gods," and thus we had not only honey for the bee-keeper, but ship and train-loads for commerce.

"Can I prove this point?" said Mr. Doolittle. He then went on to show how among the grasses none secreted nectar in this county but the clovers, and proved by the shape of the flowers, how it was impossible for the clovers to be self-pollinizing through the agency of the breeze, as were the others, hence honey or nectar was secreted by each little flowret to attract the bees, that through their agency seed might be perfected. And to clinch the matter he gave history to show how the Australian government had spent thousands of dollars importing bumble-bees from the United States so that they could raise seed from the red clover, which previous to this importation did not give sufficient seed to pay for the harvesting of the crop.

He then took trees of various kinds, and proved the same of them which he had of the grasses, and, as a clincher, told how in a certain township in Massachusetts through jealousy bees were once banished. The next year no fruit came to perfection in the interior of that township, while around the edges fruit perfected as usual, so that through this the jealous people were led to see wherein they had made a mistake, and begged the bees back again, when they had fruit as before.

[Concluded next week.]

CONVENTION PROCEEDINGS

Report of the Northeastern Ohio, Western New York and Northwestern Pennsylvania Convention.

BY ED JOLLEY, SECRETARY.

The Northeastern Ohio, Western New York, and Northwestern Pennsylvania Bee-Keepers' Association held their annual convention at Franklin, Pa., Jan. 11 and 12, 1899. Owing to the prevailing epidemic, "la grippe," and the extremely cold weather, together with the past discouraging season, the attendance was rather slim.

Pres. Geo. Spittler delivered the annual address, in which he expressed his pleasure at meeting those present. Altho he had hoped to see a larger number of bee-keepers present, he thought that these small conventions were usually as enthusiastic and fully as profitable as the larger ones; and that it was those who failed to attend that sustained the loss.

SPRING MANAGEMENT OF BEES

was the first subject on the program for consideration. Mr. Sutton managed by stimulating weak colonies by feeding, and keeping them well packed until all danger of cool nights was past. He never practiced contracting the brood-nest. Mr. Tubbs contracted to the number of combs the bees

could cover, making sure that they had plenty of honey and a good queen, adding empty combs or honey when needed. Mr. Reynolds would feed to stimulate brood-rearing as early as safe. He would feed honey if he had it; if not, he would feed sugar syrup. If the spring was late and cold he would feed artificial pollen and give water.

Some questioned if bees ever needed pollen before natural pollen could be gathered, saying that they believed late fall honey contained pollen sufficient for the needs of the bees in the early spring. The fact that bees will take artificial pollen readily, even greedily, early in the spring, was cited as evidence that bees are often then in need of pollen. Mr. Bair and one or two others had seen their bees gather pollen, or dust resembling it, early in the spring from sawdust-piles.

The question was asked if it paid to feed to stimulate brood-rearing, where there was an abundance of honey in the hive. The majority thought not.

The next question before the convention was that of large or small hives. It was settled as usual, viz.: Some preferred 8, some 9, and some 10 frames. As the old woman said when she kist the cow, "Everybody to their fancy."

Mr. Reynolds' paper, on "The Summer Management of Bees," completed the afternoon session, as follows:

Summer Management of Bees.

Summer management of bees? Why, this is easy enough. If you will give them a wide berth and keep at a safe distance, they will manage themselves. If I am not mistaken, the bee-keeper who sent me the notice, asked me to write on the summer management of bees for dollars and cents. This is what most of us keep—or try to keep—bees for, not merely for our health and the pleasure of coming in contact with the pointed way in which they do business.

We will suppose the bee-keeper has the apiary in No. 1 shape, all colonies ready to be worked as he thinks best—for queen-rearing, section honey, extracting, or the increase of colonies for sale or to keep for his own use. He may fancy rearing queens and bees for sale if the location and surroundings are good. I say this is his line, others would like the producing of comb and extracted honey; this should be their way, but keep this one idea in view.

Produce a No. 1 article if possible, and always sell it for just what it is. We cannot establish a reputation, or a market for the product of our apiary, unless we show our customers that we are to be depended upon, that they will get just what we represent to them. I have found when you gain their confidence it is easy to keep if not betrayed.

Summer management of bees for profit I think must be determined by the bee-keeper himself, for what suits one locality will not answer in another. The same will hold good regarding the season and the bee-keeper himself. Some say that they get just as many pounds of honey as their neighbor, and don't fuss half as much as he does. But a glance at the apiary and honey when ready for market tells for itself who gets the best price from their sales. Let every bee-keeper, after studying the location, the demands of the market, his fancy for the different branches of bee-keeping, choose one or all, and do the best he can. As for the best way to manage bees for profit in summer, I don't know.

But I will give my way when trying for comb honey. Our section of the country is not to be depended upon every year for a good flow, either from clover or buckwheat. I try to have the bees of the right age to gather surplus, if any, and to get them I must figure back from the time I expect the honey-flow. I must count 37 days from egg to the field-worker, and as I cannot get the eggs all laid in one day, I commence feeding to stimulate the bees to feed the queen so she will begin laying six or seven weeks before the honey-flow is expected, if I am to get my bees in shape for the first honey-flow of the season by the queen of each colony laying the eggs.

Sometimes I feed sugar syrup, if I have no unsealed sections left over or brood-combs filled. If the bees have plenty of honey in the brood-combs I will change them, putting combs of honey with the cappings shaved off if necessary between combs of brood. I like this way best, for I have had the least trouble about robbing.

Keep on feeding and changing combs until the honey harvest is at hand. If the bees show signs of swarming, I change a frame of brood with some weak colony for a frame of comb, or put in a frame of foundation.

After the sections are on, if colony we will say No. 1 swarms, put the swarm in a new hive filled with frames of comb or foundation, placing the new swarm on the stand of the parent colony, setting that in some new place. The

next morning take the sections off the old hive and place them on the new swarm. This secures most of the field-bees with the old queen, allowing the bees in the old hive to rear a queen for themselves, and to replace any old queen I may have that does not lay eggs enough to build up her colony good and strong.

If I don't want increase of colonies, I put the swarm that comes from hive No. 2 into hive No. 1, that swarmed first, returning the queen of No. 2 where she came from, and so on through the season, and I have only increased one colony of bees. I use mostly what is called T tin supers, or supers holding 24 sections $4\frac{1}{4} \times 4\frac{1}{4} \times 15\frac{1}{16}$ or $1\frac{1}{4}$, with no separators; the 8-frame hive, the frame about 17 inches long, and $10\frac{1}{2}$ deep. I use foundation in the sections from $\frac{3}{4}$ inches wide to whole sheets, always putting the sections containing the narrowest starters in the middle of the super. If the honey-flow seems to be good when the sections are about ready to seal, I raise up the super and put another under it, and continue this as long as the honey-flow lasts.

In the forepart of the season, when it is cool at night, I pack around the supers in the hives with old rags, or quilts made on purpose, paper or burlap sacks, anything to keep them warm, and I have found it pays well for the trouble.

Let us see if we cannot improve in the management of our bees this year, so when the toils of the season of 1899 have been reviewed, and we meet again in 1900 to compare notes, it will not be sorrow and disappointment we report regarding the bees, but words of good cheer and encouragement to all. Let us do our best and leave the rest.

R. D. REYNOLDS.

EVENING SESSION.

This session opened with the discussion of

SUMMER MANAGEMENT OF BEES.

Mr. Sutton managed about the same as Mr. Reynolds. When swarming occurred he managed on the Heddon plan, and depended on the swarm for the surplus. Mr. Peck managed the same for extracted honey as for comb, up to putting on the supers. He used queen-excluders to keep the queen and the pollen below. He would use excluders if he had to pay a dollar apiece for them. By keeping the queen and brood below, he got more honey in the supers, and had more in the brood-chamber in the fall. He worked for both comb and extracted honey, principally extracted. He could produce nearly as much comb as extracted honey, but his market called mostly for extracted. He thought it advisable to run for both comb and extracted honey. Mr. Spittler said if he kept but two colonies he would have an extractor.

FEEDING BEES—OUT-APIARIES OR BEES ON SHARES.

Tapping the question-box brought forth the query, "What is the best method of feeding bees?" The majority used a Mason jar with a cloth tied over it, inverted over the frames. Mr. Sutton took the porcelain lining out of the lid, and punched a row of holes around the outer edge of the lid from the inside. This worked nicely, and was much handier than tying a cloth over the jar. Mr. Bair fed his bees by brushing the honey or syrup into the empty combs with a painter's brush, and hanging the combs in the hive.

The next question was, "Is it preferable to run an out-apiary, or put the bees out on shares?" It was decided that where the owner had time to work an out-apiary it was best to do so; but where he had more bees than time it might be best to put them out on shares. It was considered a fair arrangement for putting bees out on shares, for the owner to let them out for half the honey and half the swarms, each party paying half the expenses for supplies, the owner to get all his old colonies back at the end of a stipulated time. If any of the old colonies died during this time, it was the owner's loss, but he should get the hives and combs.

Mr. Sutton next gave a talk on increasing our honey resources. In brief his ideas were, to plant and encourage the planting of small fruits, white, sweet and Alsike clovers; and where shade-trees were needed, to plant linden.

The next question was, "In producing comb honey is it best to use separators or not?" The majority thought that it was best. Messrs. Sutton and Reynolds used no separators.

The next query was as to whether any one present had tried the fence separators. No one present except Mr. Tubbs had used them, and he found no advantage in their use.

Next in order was a paper by Mr. B. W. Peck, of Trumbull Co., Ohio, on

How to Improve the Conditions of the Local Honey Market.

It is with considerable hesitation and a feeling that I am tackling one of the labors of Hercules that I attempt to jot down on paper a few thoughts on this important subject.

Of course, it might reasonably be inferred that an experience in producing honey and building up a home country-market for the same, covering a period of 18 years, might well give rise to some ideas on the subject that would be of value to other bee-keepers, yet I feel that there is a great difference between marketing honey and writing articles on the same, and however much or little I may convince you that I know about the former, I am certain that when I am done you will be unanimously of the opinion that the latter is out of my line of business. However, if I should happen to stumble on some point that would excite discussion, I should feel that I have accomplished the principal object of a paper of this character.

The first and most important point to be considered in building up and keeping a home market is the *quality* of the honey. Under no circumstances do I attempt to sell anything but well-ripened honey. It should also be of the best color possible. Of course, we shall have to dispose of some dark honey, but our customers should have a fair opportunity of sampling it, and it should be sold at a lower price than the whiter goods. I leave as much as possible of the dark honey in the brood-nest, but even then I have two or three thousand pounds of it to dispose of in an ordinary season. I find that my customers prefer it at the lower price, and as they understand exactly what they are getting there is no cause for complaint. In making my fall sales I usually have the amber, white, and dark honey in the same load, which gives customers a fair opportunity of seeing the difference in quality as well as price, and govern themselves accordingly.

In this, as in all matters pertaining to the marketing of honey, absolute honesty is the best policy. One price to all should be the rule. If one for the sake of closing out a load quickly is tempted to cut the price in the hope that his other customers will not know it, he would better resist the temptation, for such information travels very rapidly, and it will not be very long before some one, perhaps several miles distant, will say, "I understand you sold it for such a price to so and so, and I don't want to pay any more than he does."

A reputation for honest and square dealing will also help us to deal with those who are unduly suspicious of adulteration in honey. There are still some ignorant enough to suppose that granulation of honey is positive proof of the presence of sugar or some other foreign substance therein. I label it all "Pure Honey," and on the label are directions as to what to do if it granulates. It is also necessary to supplement this with extensive verbal explanations in many cases, and how much of it is believed depends largely on the amount of confidence placed in the salesman. I have found it profitable in many cases to leave a copy of a honey-leaflet, which explains clearly the subject of granulation, and explodes some of the popular myths in regard to adulteration. But most important of all is to become acquainted with our customers, and to win their confidence that they may be more ready to accept our explanations of these matters.

In regard to the size of the package, I use cases of 12, 20, and 24 pounds each for comb honey, and about uniformly use 25-pound pails for extracted honey.

In working up new territory it is well to have some smaller package, varying from three pounds to 25. With a small package a new customer may be secured who could not be induced to purchase 25 pounds at first; but after the trial trip I usually follow this up with the uniform size—25 pounds. I find it better to break a package occasionally, or weigh out whatever may be wanted, than to carry small packages; for very many take the large packages without objection who would take the smaller ones instead if they had the opportunity; this would make it necessary to cover the same territory too frequently. As I dispose of six or seven thousand pounds in this way in an ordinary season, I find it desirable to sell it in as large packages as possible.

It is not always desirable, however, to sell all that you can to one individual. There are those who can be induced to take two 25-pound pails at the same time. Some people will thereby become so tired of honey that they will not buy any at all the next season, but will tell you that they have some of your last year's sale still on hand. I would rather make a smaller sale and meet a hungry customer the following season. However, the cases in which one is in danger

of selling more than can be satisfactorily consumed are comparatively rare.

In regard to prices, this will depend of course largely on local competition. In general I think we should get not less than 12 cents a pound for white comb honey, and 8 cents a pound for white extracted; and generally I have no difficulty in getting these prices.

There is one kind of competition however which I would like to hear discuss at this meeting. After long years spent in building up a home market, we are commencing to reap the fruits of our labor, and have secured a long list of regular customers who are looking to us to supply them yearly with honey, when along comes some fresh young competitor, whom you yourself, perhaps in a moment of mistaken benevolence, have started in the business, who, for the purpose of securing your customers, offers it to them at a slightly lower price than you have been receiving. Is this legitimate competition? If not, how is it to be met? Some of the editors of our bee-papers would say, "Get them to subscribe for a good bee-paper;" but I've tried that, and I find that it makes an already unscrupulous competitor a more powerful and effective one. I can't help but believe that if we should induce all the small honey-producers about us to subscribe for bee-papers, it would result in still lower prices. As a question of business policy, can we afford to do it?

I have now, I think, sufficiently indicated some of the conditions of a local market, both favorable and unfavorable. If I have not fully answered the question "how to improve them," I hope I have at least suggested something worthy of your consideration, and that the discussion following may serve to supplement and correct the deficiencies of this paper.

B. W. PECK.

Mr. Tubbs thought that it was not best to try to induce our neighbors to go into the bee-business, or subscribe for bee-papers. The majority however thought that there was room for more good bee-keepers—always room at the top—and that every bee-keeper should be a reader of bee-literature.

It was thought that many of those who injure the market do so inadvertently, or from a lack of understanding the conditions of the market; and that this condition might be alleviated if there was more fraternizing among bee-keepers, more visiting back and forth, getting better acquainted with our neighboring bee-keepers, and, through discussion, arrive at a better general understanding of the conditions of the market, and how to meet them.

SECOND DAY—MORNING SESSION.

"Profitable use of comb foundation." Messrs. Tubbs, Sutton and Reynolds used starters in the sections. Objected to full sheets on account of "fishbone." All present used full sheets in the brood-frames, except Mr. Silzli, who used starters in both sections and brood-frames.

"Preparing bees for winter." The first preparation was to see that they had a good queen in the fall and plenty of good honey. Nearly all present practiced out-door wintering. Nearly all used double-wall or chaff hives. Chaff, straw or forest leaves was the packing generally used. Mr. Silzli used paper with excellent results.

"How to prevent robbing." Leave no honey exposed during a dearth of honey, and keep good queens in your colonies. Mr. Sutton said he believed that robbing never occurred in a colony that had a first-class queen.

"Making the Association more useful." Mr. Spitler thought that our meetings were very good, but if a larger attendance could be secured greater good to a greater number would result. He thought it would be advisable for the Association to offer some premium—a bee-paper he thought would be a very good and appropriate premium to offer as an inducement to attend the conventions.

The following officers were elected for the coming year: President, Geo. Spitler, of Pennsylvania; Vice-President, B. W. Peck, of Ohio; Secretary and Treasurer, Ed Jolley, of Franklin, Pa.

Andover, Ohio, was chosen as the next place of meeting.

AFTERNOON SESSION.

Mr. Sutton exhibited his new extension swarming-pole. This pole was made to use an ordinary swarming-box, or any other swarming device. By means of a cord within the pole, its length could be instantly extended from 12 to 22 feet, or any intermediate length desired.

It was originally designed to have some bee-keeper of long experience give a sort of reminiscence. In the absence of such a paper it was decided to hold a regular old

Methodist experience-meeting, except that our experiences should be about bees and things kindred. This was really one of the most enjoyable features of the convention—one in which all took part. Had any of the uninitiated been in the corner listening, they might have thought, "What great fishermen those fellows would have made!" It would be superfluous to attempt to give each one's experience here in detail, nevertheless these experiences were thoroughly enjoyed by all present. But I cannot refrain from giving a part of what Mr. Bair said.

Mr. Bair is a veteran—a veteran soldier and a veteran bee-keeper. After giving some of his more common-place experiences, he told us some of the curious superstitious ideas in vogue when he commenced bee-keeping. "In those days," he said, "when a swarm of bees came out, and you had not the necessary things at hand to make sufficient noise, if you ran into the kitchen and took a loaf of bread, turned it upside down on the table, and plunged a knife down through the loaf into the table, the swarm could not possibly go away, but was sure to settle. If you had everything ready, and the family all at home, a loud noise was all that was necessary to cause them to settle. If, perchance, they had started to leave before you discovered them, if you could run ahead of them and turn your hat upside down on the ground the swarm could not possibly pass over it. If you succeeded in getting them hived, if you would go to the pig-sty and get some dirt and put it on top of the 'skap,' it would be impossible for the bees to leave. If a member of your family died it was necessary to go and tell the sad news to the bees, or else you would never have any more luck with them."

A number of other experiences were fully as ludicrous and enjoyable.

The convention adjourned to meet at Andover, Ohio, Jan. 12 and 13, 1900.

ED JOLLEY, Sec.

QUESTIONS AND ANSWERS

CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Moving Bees the Middle of February.

I have my bees in the cellar (Feb. 14), but as I have moved about eight miles from them I would like to move them, as the man that lives in my house doesn't know anything about bees. If I move them now I can use a sleigh. Will it be all right if I move them and give them a flight before putting them into the cellar here? I would like to have them here, but I don't want to do anything that will harm them. I have only 11 colonies; they are hybrids and golden Italians.

WISCONSIN.

ANSWER.—So near spring as this there would be little risk in hauling them and putting them directly into the cellar, as they will not likely be confined there very long at farthest. But it may be still better to wait a little later, and set them directly on the summer stands.

What to Do with a Queenless Colony.

One of my colonies, a swarm of last summer, did not do well, while the other colonies stored from one to three supers each full of honey. This one colony filled the lower box all right, but did not do anything in the super, and showed a forlorn appearance during fall. I believe the colony is queenless, but my perception came too late—I had my bees in the cellar before I knew the probable cause of inactivity. I dare not examine the colony while in the cellar, but as soon as I can put them out, I shall examine it and find whether it is queenless. My question is: Would it be advisable to introduce a new queen if queenless? and when would be the proper time to do it?

IOWA.

ANSWER.—If you have only lately commenced keeping bees, the advice to give you is to give the bees a queen as soon as you can get one for them in the spring. Not that such advice is at all good; but it's the only advice you'll follow. If, however, you've kept bees long enough to be a little toughened, then my advice is not to think of giving

them a queen. It's a little doubtful if you'll have a chance anyhow, for a queenless colony put in the cellar doesn't generally come out alive, and if it does the bees are likely to be so old that it will only be an aggravation to give them a queen, for they will be rapidly dying off and will make very slow work building up to a colony that's worth anything. The wise thing will be to unite them with a weak colony, or divide them among several. Do this as early as the weather is warm enough for bees to fly freely.

What About Catalpa for Bees?

Do you know anything about the catalpa tree for honey? I have about 60 of them, and they were loaded with blossoms and bees last spring.

MENDOTA.

ANSWER.—I don't know. My impression has been that they are not of much value, and yet the fact that bees are plenty on them is pretty strong evidence that they are of value. Even if the bees get only a little nectar from them, or if they get only pollen, it's just that much more than they'd otherwise get, for the bees wouldn't work on them if they could do better elsewhere.

Closed-End vs. Open-End Frames—Foundation Fasteners for Sections.

I am situated so that my bees have abundant pasturage on willow early in the spring, followed by dandelion, April flowers and other wild flowers. Large fields of wild mustard are in full bloom by June 1, but bees do not gather any surplus honey from it. By the last of June wild clover is in full bloom which yields our main flow of honey.

1. Under these circumstances, do you think that the closed-end frame hive would induce bees to breed up faster in the spring than in the ordinary Hoffman frame, so as to be in full force to work on clover to the best advantage, and probably gather some mustard honey?

2. Which foundation fastener for sections do you recommend?

3. What is your opinion of the A. C. Miller fastener?

OSAKIS.

ANSWERS.—1. With the ends entirely closed, the bees are warmer for winter and warmer for breeding up in spring, but the advantage is more than counterbalanced by the inconvenience in handling, unless I am mistaken, and I don't believe there would be enough difference made to allow a harvest from flowers earlier than open-end frames would allow. But where propolis is scarce there is not the same objection to closed-end frames, and with propolis as plenty as it is with me, Hoffman frames are by no means desirable.

2. I've never tried anything that does better than the Daisy fastener.

3. It doesn't work as well for me as the Daisy.

A Bunch of Ten Questions.

1. What kind of bees are the yellow-banded Adel bees? Are they good honey-gatherers?

2. Will bees finish queen-cell cups when they have a fertile queen?

3. I have some partly-filled sections where honey is partly candied. Is there any use I can make of them, or will the bees clean out the candied honey if I put them in supers on the hives next spring?

4. Are tin supers better than others? and do sections come out of tin supers cleaner than wooden ones?

5. Is it well to divide when bees swarm and return to their hive when they have a clipt queen?

6. Will capt queen-cells hatch out in an incubator?

7. I have some moldy frames of honey which I kept over winter. Will it do any harm to give them to the bees next spring?

8. About how many eggs does a young queen lay?

9. To-day it was warm, and my bees wanted to fly, but the ground was covered with snow, so I put on the entrance of the hive some wire-netting. Was that all right?

10. How close, or how much, do you cut the queen's wings?

NEW JERSEY.

ANSWERS.—1. I never saw any of them. If I am not mistaken, it is a strain of Italian bees to which that name

is given, just as you might take a colony of Italian bees and give them a particular name.

2. That depends. If you look into almost any hive containing a colony, you will find a number of queen-cell cups that will remain unfinished until the bees think of swarming, when they will be occupied and finished. They will not be occupied and finished unless a fertile queen is present, for if the queen is taken away, instead of rearing a queen in one of these cups, a larva in a worker-cell will be chosen.

3. If the least bit of honey has candied, it is doubtful that you can get them cleaned out so they will be good to use again.

4. I never before heard of "tin" supers, and I doubt whether such are in use. It is probable you have reference to T tin supers, or, as they are generally called, T supers. The only tin about them is the bottom supports on which the sections rest, and these are called T tins because a cross-section looks like the letter T inverted—1.

5. The common practice is to set the old hive to one side, let the swarm return to a new hive placed on the old stand, and let the queen go in the new hive.

6. Yes, a sealed queen-cell will hatch out a queen if kept anywhere warm enough.

7. That's the best thing to do with them, only you mustn't give one colony so many at a time as to discourage it. You may give to a colony as many as two or three at a time outside of its brood-nest.

8. She lays one at a time. When she first begins to lay she will lay very few in a day, but when she gets fairly warmed up to the work—say when the white honey harvest is about at hand—she will not think it a very big thing to lay 2,000 or 3,000 every 24 hours.

9. You might have done better. That left the light shining in and the warmed air coming in, urging the bees in the strongest way to come out for a play-spell, and the fact that they are fastened in seems to make them all the more fierce to get out, so that it is quite possible more bees die in the hive than would die on the snow. The better way would have been to put boards or something of the kind in front of the hive so not a ray of light could enter.

10. A queen has four wings, two on each side. Cut the two on one side as short as you conveniently can.

Number of Colonies to a Load.

How many colonies do you commonly put on a wagon at a time?

ILLINOIS.

ANSWER.—Generally I put on all the wagon holds—31 colonies. Nine of these go in the body of the wagon under the rack, the other 22 on the rack.

Bees Flying Early—Robbing—Clover—Best Size of Hives, Etc.

1. Is it early to have young bees in the hive? I had some that took a flight Jan. 15.

2. I have a strong colony that is queenless. Will they rear a queen now if I give them some brood, before natural pollen comes in?

3. I have some bees that want to rob. It seemed that they got a start at a queenless hive, and I put them into the cellar, yet there seemed to be quite a number working around all the hives. What shall I do? Do all bees rob to some extent during warm days in winter?

4. What kind of clover would you recommend for this State (Tennessee), sweet or Alsike? We have red clover, but it doesn't yield nectar as well.

5. What kind or size of hive is best for comb honey—10-frame or 8-frame? I use the standard Langstroth 10-frame.

6. Will bees store honey enough in an 8-frame hive to winter on?

TENNESSEE.

ANSWERS.—1. Generally no brood will be found as early as Jan. 15, altho it is quite common to find breeding commence in February when bees are wintered out-doors. If the bees that flew Jan. 15 had just emerged from their cells, that was remarkably early. It is possible they had emerged so late in the fall that they still appeared young.

2. They might, but it would not be very successful, and the wisest thing you can do is to unite them with a weak colony that has a good queen.

3. You can't get bees so honest that they'll never rob if the temptation is great enough, and you can't do anything with the robbers to stop them. The only thing is to keep

everything as safe from them as you can, not exposing honey and not keeping weak and queenless colonies.

4. Sweet and Alsike ought both to do well with you. Unless your stock has learned to eat sweet clover, you may find Alsike the more profitable for forage. Likely an acre of sweet clover will yield more honey than Alsike, but you must consider its other value as well as its value for honey.

5. It depends much on the management. Unless a good deal of attention is paid to them, 10-frames are better.

6. Sometimes, and sometimes not. If the combs are kept filled with brood until pretty late, there is hardly room enough for honey. If left to themselves there is more danger of suffering for want of stores in 8-frame than 10-frame hives.

Getting Bees to Empty Partially-Filled Sections.

On page 98, near the beginning of the page, I see a way given to get honey emptied out of sections. Now what I want to know is this: If I put on a hive a super of sections partly finished, and then put over that another super having sections with a little honey in them, will the bees carry down the honey out of the upper super? SUBSCRIBER.

ANSWER.—So far as I have tried anything of the kind—and I have tried it extensively—it has been an utter failure.

Using a Bee-Escape—How Much Comb Foundation—Transferring from a Tree.

1. Can I use a bee-escape on an improved Langstroth-Simplicity hive without a super? or will I have to use supers? If so, would it be well in this part of the State to use double supers?

2. How much comb foundation do I require through the summer for two hives? and which is the better, the extra thin surplus or the thin surplus, if I use a one or two inch starter in an 8-frame hive for comb honey?

3. How can I transfer a swarm of bees from a tree in the woods? Will I have to cut the tree off so short that I can carry the trunk home, or can I take a hive along to the tree and transfer them there? What is the best way to do this, and what time of the year?

4. Which bee-book do you consider the better for a beginner, the "ABC of Bee-Culture" or Prof. Cook's "Manual of the Apiary." MINNESOTA.

ANSWERS.—1. I'm not entirely sure whether I understand your question. There's hardly any need of a bee-escape unless you have something in the line of a super, understanding, of course, that by a super is meant anything that is put over the hive in which to have surplus honey stored. It may be a super to contain sections, or it may be a super to contain extracting-combs. In either case an escape can be used. If by "double super" you mean two supers on a hive at a time, it is generally advisable to have more than one super on at a time if there is a good honey-yield and the first super is pretty well advanced. If I haven't struck the right idea, ask further and I'll try again.

2. I don't know which is better, altho I have generally used the thin. When not storing, the bees are likely to gnaw the extra-thin more than is desirable. To be sure, supers should not generally be left on the hive when bees are not storing, but one wants them on a little before storing begins, and sometimes there is a temporary lull when the bees stop storing for a very short time and then begin again. One pound of foundation will probably do for what you require.

3. Either way will answer; whichever is most convenient for you, taking all things into consideration.

4. Probably no bee-book in the world is fuller of practical information than the "ABC of Bee-Culture." "Cook's Manual" contains information that is lacking in the "ABC of Bee-Culture" as to the natural history of the bee from the stand-point of an entomologist, as well as giving practical information. I wouldn't like to spare either of them, nor would I like to be without Dadant's Langstroth.

Langstroth on the Honey-Bee, revised by the Dadants, is a standard, reliable and thoroughly complete work on bee-culture. It contains 520 pages, and is bound elegantly. Every reader of the American Bee Journal should have a copy of this book, as it answers hundreds of questions that arise about bees. We mail it for \$1.25, or club it with the Bee Journal for a year—both for only \$2.00.

GEORGE W. YORK, Editor.



PUBLISHED WEEKLY BY

GEORGE W. YORK & COMPANY,

118 Michigan St., Chicago, Ill.

ONE DOLLAR A YEAR.



SAMPLE COPY FREE.

[Entered at the Post-Office at Chicago as Second-Class Mail Matter.]

United States Bee-Keepers' Association.

Organized to advance the pursuit of Apiculture; to promote the interests of bee-keepers; to protect its members; to prevent the adulteration of honey; and to prosecute the dishonest honey-commission men.

Membership Fee—\$1.00 per Annum.

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GEN'L MANAGER AND TREASURER—Eugene Secor, Forest City, Iowa.

VOL. 39.

MARCH 9, 1899.

NO. 10.



NOTE—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England:—Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

The Dot Contest Prizes we expect to close up in the next issue of the Bee Journal. Judging from the number of responses we have received to our suggestion that the cash winners donate their prizes to the Langstroth Monument Fund, we think that about half of them have done so. This should make an addition to that Fund of about \$50. But next week we will know exactly, and we will also remit to the balance of the winners the several amounts due them. We would have done this before now, but we have all been so busy in the office that we could not well reach it. And then, we wanted to give *all* the winners a good chance to contribute to the Monument Fund.

Philadelphia, Sept. 5, 6 and 7.—The following notice is sent us by Dr. A. B. Mason, the Secretary of the United States Bee-Keepers' Association, which we are glad to give a place in these columns:

TOLEDO, OHIO, Feb. 27, 1899.

The Executive Committee of the United States Bee-Keepers' Association has complied with the request of the members as expressed at the Omaha convention, and decided to hold the next convention of the Association at Philadelphia, Pa., commencing Tuesday evening, Sept. 5, holding three sessions on Wednesday, and three on Thursday, the last being on Thursday evening.

The program is being prepared, and arrangements are being made for the entertainment of those in attendance on the meetings. Notice of exact place of meeting, railroad and other arrangements, will be given in due time.

The Philadelphia Bee-Keepers' Association, with only one exception I believe, is composed of amateurs, who are keeping bees for pleasure, and not profit in dollars and cents, and its members are showing quite an amount of in-

terest in the coming convention; and in a recent letter from its Secretary, in speaking of securing rates, and places for delegates, he says: "I can assure you that we will do everything we undertake to do in a thorough manner." So we shall have a cordial reception, and an interest taken in our comfort.

A. B. MASON, Sec.

We hope that just as many of our readers as possible will begin to make their arrangements to be present at the National Convention in September—during the Grand Army meeting, when railroad rates will be low.

Some Wisconsin Statistics for 1898.—We are informed that the apian output among manufacturers in Wisconsin during 1898 was as follows: 30,000,000 sections; 100,000 hives; and 30,000 pounds of beeswax made into comb foundation. These figures do not include the supplies handled by dealers, simply manufacturers. Of course Wisconsin stands at the head in the output of sections and hives; and likely Ohio would come next.

Bee-Keeping as a Sole Business.—The Question-Box of this journal lately discuss whether it is safe to depend upon bee-keeping alone for a livelihood. Editor Hutchinson quotes approvingly the answer of C. P. Dadant, "Yes, provided you do not keep less than 300 to 500 colonies," and says if a man keeps only enough bees to make a living in a good season, a bad season will oblige him to add some other business. He thinks the best thing to add is *some more bee-keeping*.

The Michigan Foul Brood Bill.—Hon. Geo. E. Hilton, President of the Michigan Bee-Keepers' Association, has sent us a copy of the proposed Foul Brood Bill now before the State legislature, with the request that we give it space in the Bee Journal. It reads as follows:

SEC. 1.—The people of the State of Michigan enact that upon the recommendation of a majority vote of the members of the Michigan State Bee-Keepers' Association, the governor shall appoint for a term of two years a State inspector of apiaries, who shall, if required, produce a certificate from the governor that he has been so appointed.

DUTIES.

SEC. 2.—The inspector shall, when notified, examine all reported apiaries, and all others in the same locality not reported, and ascertain whether or not the disease known as foul brood exists in such apiaries; and if satisfied of the existence of foul brood, he shall give the owners or caretakers of the diseased apiaries full instructions how to treat said cases, as in the inspector's judgment seems best.

DESTRUCTION OF BEES.

SEC. 3.—The inspector, who shall be the sole judge, shall visit all diseased apiaries a second time, and, if need be, burn all colonies of bees and combs that he may find not cured of foul brood.

VIOLATIONS.

SEC. 4.—If the owner of a diseased apiary, honey or appliances shall sell, barter or give away, any bees, honey or appliances, or expose other bees to the danger of the disease, or refuse to allow said inspector to inspect such apiary, honey or appliances, said owner shall, on conviction before a justice of the peace, be liable to a fine of not less than fifty dollars, or more than one hundred, or not less than one month's imprisonment in the county jail, nor more than two months' imprisonment.

ANNUAL REPORT.

SEC. 5.—The inspector of apiaries shall make an annual report to the governor of Michigan, giving the number of apiaries visited, the number of diseased apiaries found, and number of colonies treated; also the number of colonies destroyed by fire, and his expenses.

EXPENSES.

SEC. 6.—There is hereby appropriated out of any moneys in the State treasury, not otherwise appropriated, a sum not exceeding five hundred dollars per year, for the suppression of foul brood among bees in Michigan. Said in-

spector shall receive four dollars per day and traveling expenses for the actual time served, which sum shall not exceed the moneys hereby appropriated, to be paid by the State Treasurer upon warrants drawn and approved by the Governor.

SEC. 7.—This Act shall take effect and be in force from and after its passage and publication.

SEC. 8.—By this Act all previous legislation on the subject of foul brood on the statutes of Michigan is hereby repealed.

Mr. Hilton also desired us to again urge all bee-keepers in Michigan to write at once to their senators and representatives at Lansing, urging them to favor the passage of the Foul Brood Bill as above.



DR. C. C. MILLER was in Chicago last week attending the third quarterly meeting of the Chicago Bee-Keepers' Association. It is just wonderful how young he keeps. He is 67, and Dr. Peiro, when so told, said, "Why, he doesn't look a bit over 50." But may be it's a habit doctors have—of looking young. Now, Dr. Peiro is 59, and he doesn't look much over—well, 45. Of course doctors ought to know how to keep looking young while they help to make the rest of us look old!

REDBUG NOT BEDBUG.—Mr. O. O. Poppleton, of Dade Co., Fla., wrote us Feb. 28:

FRIEND YORK:—On page 115 of your issue for Feb. 23, first column and last paragraph, the word "bedbug" is printed for "redbug." Please correct the mistake, as the balance of the paragraph reads rather funny as it is.

Bees are doing the poorest in building up this winter I have ever known them to do here. The reason is because the extensive fires last spring destroyed our winter pasturage.

O. O. POPPLETON.

DR. C. A. DAVID is one of Chicago's eminent medical specialists. He was born in 1845, in Richland Co., Ill., and came to Chicago in 1875, when he decided to devote himself exclusively to one class of diseases—that of the rectum—such as the treatment of piles, fistula, irritable ulcers, strictures and the like. He then took a thorough course at the University of New York, graduating therefrom in 1882. Dr. David has superseded the old methods of torture with a more rational treatment, and, as a consequence, success has attended his efforts, and by the profession at large he is recognized as an authority. His success may best be summarized by the simple statement that of the vast number of treatments which he has given, aggregating nearly 100,000, he has never lost a case.

We have recently had occasion to patronize Dr. David, and are glad to recommend him to all who require the kind of service he can so successfully and satisfactorily perform. His office is in the Champlain Building, northwest corner of Madison and State streets, Chicago. To our mind he exemplifies to the fullest degree the highest ideal of the Christian physician.

MR. FRANK McNAY, of Wisconsin, who with his wife, has been spending the winter in California, wrote us as follows from San Francisco, Feb. 20:

FRIEND YORK:—California seems to be doomed to another year of severe drouth, as there has been no rain for several weeks, and only about an aggregate of three inches in most locations in Southern California, and but little more up here. Bee-keepers are fast losing hopes of a sufficient amount of rain to secure any honey, and bees are being shipt to Arizona and Utah.

The very small amount of rain and exceptionally fine warm weather have afforded us an excellent winter for touring. Mr. J. H. Martin (Rambler) was our near neighbor while in Los Angeles, and on our Rambler wheels we enjoyed many long rambles to the country and mountains with "Rambler" as our guide.

Before leaving Los Angeles we enjoyed an ocean voyage to San Diego and return. I also had a very pleasant visit with Mr. Harbison, and a drive of 25 miles out to his large apiary, which is an ideal location on his 700-acre ranch in a mountain canyon.

I also took a ride by wheel over the Mexican border, returning by way of Coronado Beach and the famous hotel.

We have now spent a week looking over San Francisco, Oakland, the Golden Gate Park, Sutro Heights, and the Beach, and I took a wheel-ride to San Jose, 45 miles down the Bay, through a fine farming and fruit valley. But we do not enjoy this part of the State as well as Los Angeles and vicinity, and we will soon leave the coast, as we wish to spend a few weeks in Salt Lake City and Denver before returning home.

FRANK McNAY.

We are glad our friends have enjoyed themselves so much in California. Some day we hope to be able to follow their example, and ramble around awhile in winter in a warmer clime.

DR. PEIRO, when on his trip West last fall, also visited the States of Oregon and Washington. He has this to say about them:

I have given much thought regarding the matter of migration to either of the above States since a personal observation of the several encouragements each offer, particularly in an agricultural and horticultural sense, and conclude that to the young man of brains and brawn anxious to "get on in the world" a well-selected piece of land for a farm home in either of these States is preferable to the drier altitudes of Arizona, California, or even Idaho. Much moisture can be depended upon to insure regular crops, and the market for any produce is fully as favorable.

Because of the plentiful and natural irrigation, fruits are abundant, small grain yields fine average crops, and hay (alfalfa, especially) is always and bountifully to be depended on. Hence to the young, or even middle-aged, blest with health and a willingness to work, I suggest they investigate the possibilities of these comparatively new but fast-growing States. From a climatic point of view I should deter the weak, consumptive or inflammatory rheumatic patient from going there.

DR. PEIRO.

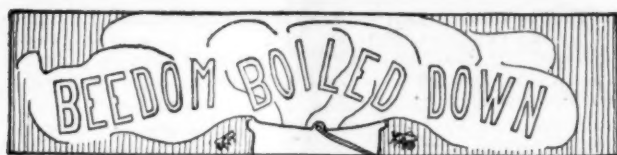
THE UNION COMBINATION SELF-FEED RIP AND CROSS-CUT SAW, while it is designed for wood-workers generally, is especially valuable for making bee-hives, frames, etc. This machine and attachments are suitable for ripping, cross-cutting, mitering, rabbeting, grooving, graining, dadoing, boring, scroll sawing, edge moulding, beading, etc., thoroughly practical in every particular, and easy to operate. It has a large combination wood and iron table, 28x36 inches, with extension rolls, four changes of speed and three changes of feed. It has babbitt metal lined boxes which are adjustable to take up the wear; has steel shafts and machine cut gears; has foot power with a walking motion, and a chain belt attachment for fast speed. A complete illustrated catalog fully describing this machine and attachments, also a full line of wood-working machinery, will be sent on application. Send for catalog "A." Address the manufacturers—The Seneca Falls Mfg. Co., 46 Water St., Seneca Falls, N. Y., and say you saw their advertisement in the American Bee Journal.

EDITOR HUTCHINSON, of the Bee-Keepers' Review, had this to say in his February number:

"The American Bee Journal began the year with a new dress of type and a number of little nicknacks that add to the beauty of its personal appearance. By the way, this journal recently printed 15,000 copies; the extra copies to be used as samples. This is probably the largest single issue of any bee-journal that has ever been printed in this country."

Many thanks, Mr. Hutchinson. But the number we printed in that large edition was 16,000. You mist it by only 1,000.

I. J. STRINGHAM, 105 Park Place, New York, N. Y., has sent us his catalog of bee-keepers' supplies for 1899. He is one of our regular advertisers, and will be glad to mail his catalog to all who will write him for it. Please mention the American Bee Journal should you write Mr. Stringham or any others of our advertisers.



Long Heating Darkens Wax, as also does frequent reheating, altho slow cooling allows the impurities to settle to the bottom, says Editor Root.

Smoking Bees When Taking from the Cellar is recommended by C. Davenport, in the Bee-Keepers' Review. It helps to keep the bees from mixing up and going into the wrong hives, and no harm comes from the smoking. An acquaintance of his prefers a windy day for taking out, as bees fly closer to their hives, thus mixing less.

Moths will not Trouble Dry Combs, if such combs are entirely free of honey, pollen, or cocoons. J. B. Hall told the editor of the Bee-Keepers' Review that an excluder keeps the queen out of extracting-combs, the bees lick them clean at the close of the season, then there is no trouble from worms, even if the combs are stacked up in hives outdoors and the hives left open to the moths.

Do Bees Freeze?—Dr. Miller discusses the question in the Progressive Bee-Keeper, and says that while it is true that bees enough in a cluster, with air and food enough and cleansing flights enough, are in no danger of freezing, yet with some of these conditions lacking they may freeze in a temperature not so very low; and that when the unqualified statement is made, "Bees never freeze; they starve," the answer should be, "Bees do freeze, millions of them."

Does Black Anger Bees?—J. H. Martin thinks color does not make so much difference as texture and cleanness. Fuzziness is more than color, a fuzzy hat, white or black, attracting attention, and a hole in such a hat being a special target.—Bee-Keepers' Review. Those who say they have seen bees make a distinction on account of color may be hard to satisfy that there is no such thing by the testimony of those who have never observed it.

American Hives Larger than German.—In Germany, bee-keepers in general don't know what a large hive is. Only lately I was reading how a German bee-journal made fun of the French for using the large Dadant hives, and when a large yield is reported from such hives they call it pure humbug.... I may further say that here in America entrances are very much larger than in Germany, and the bees seem to prosper with them.—L. v. Stachelhausen, in Deutsche ill. Bztg.

A Point in Favor of Small Hives, and a strong point in his estimation, is given by the editor of the Bee-Keepers' Review. If the bees get started with more honey in the brood-nest than brood, or even half as much honey as brood, the habit of storing in the brood-apartment has become so strong that they will not give it up. He especially values the practice of giving at the opening of the harvest a super of drawn combs, thereby inducing the bees to begin their storing in the super.

Nailed Sections Preferred.—Says G. M. Doolittle in the Progressive Bee-Keeper:

"I consider that nailed sections are enough better for shipping honey, to more than pay for the extra time spent in nailing them, for the loss by breakage with other than nailed sections rules so much greater than with the nailed that the damage through breakage will more than hire the sections nailed, or pay the bee-keeper for his time when nailing them himself."

A New Separator is described by Jacob Alpaugh, in the Bee-Keepers' Review. The separators are supported in the super by a strip of tin at each end of the super, the same as in a T super, but instead of a T tin the sections are supported by strips of tin fastened to the separators. These pieces of tin are 1½ inches long and ½ inch wide, ¼ inch at the bottom being turned at right angles to support the corner of the section. Some one got up something of that kind before. Was it L. A. Aspinwall?

Bees Needed for Fruit.—Press Bulletin No. 8, of the Kansas Experiment Station, says:

"If bees are kept from fruit-blossoms by netting or other artificial means, the amount of fruit set is little or none. It not infrequently happens that inclement weather prevents or hinders the flying of bees during the period when the flowers are receptive. A fruit-tree, half of which was subjected to a continuous spray of water during the flowering period, produced no fruit upon the sprayed portion, but an abundance upon the other. A failure due to the above-mentioned cause cannot well be prevented, but may be modified by having bees near at hand to utilize the short favorable periods which do occur.

"An insufficient supply of bees will hinder the setting of fruit. While other insects may take part in the carrying of pollen, the fruit-raiser must rely chiefly upon honey-bees. Experience shows that, tho hungry bees may fly two or three miles, hives should be within half a mile of the orchard or small-fruit patch."

Boiling Foul-Broody Honey is discust by the Bee-Keepers' Review without reaching any positive conclusion as to how long boiling is required. If the work of the scientists is to be counted, Editor Hutchinson thinks Dr. Miller may be justified in demanding 2½ hours. But he seems to think we can't count too much upon what the scientists find out, and cites, among other things, that Cheshire reported foul brood spores in the eggs of a queen, while a queen from an infected colony has never carried the disease to another colony. That leaves the possible inference that Cheshire was mistaken as to finding spores in eggs. After Mr. Hutchinson had written this, he made a visit to Guelph, Ontario, had an interview with Prof. Harrison, the bacteriologist, and saw some things through a microscope. Instead of knocking into pi what he had written, with admirable frankness he lets it stand, and adds that through that microscope he saw with his own eyes spores in an egg. Perhaps it is well for all to avoid being too positive, no matter which side we are on.

Baits in Supers Help to Prevent Swarming.—A Stray Straw in Gleanings says: "If L. Stachelhausen is correct, as I think he is, as to the effect of baits in supers, page 85, then they form quite a factor in prevention of swarming. Forcing bees to begin on raw foundation in the super by the crowded condition of the brood-nest is forcing them just so much toward swarming. [This is a good point. It is one of the golden nuggets that appear in the ordinary articles of some of our contributors, but which the editor had not seen. I now desire to give it all the prominence I can, as I believe there is a good deal in it.—Ed.]

Winter Protection.—D. W. Heise—the man that notes and picks for the Canadian Bee Journal—is getting ready for himself a whole lot of trouble. He has so little respect for generally accepted opinions that he says if the cluster of bees is properly protected on top and sides, he would rather have his hives out in the open plain than surrounded by evergreen hedges or high board fences. When too much protection is given by buildings, fences, etc., the bees venture out when too cool for their safety, while the bees in the open mind their business and stay at home.

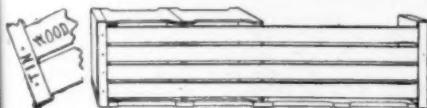
Liquefying Extracted Honey Before Selling is a mistake in the opinion of D. W. Heise. Instead of taking that trouble, he sells his honey in whatever condition it happens to be, taking pains to instruct his customers what they must do to liquefy it, and finds his advantage in doing so.—Canadian Bee Journal.

Heise's head is level. No matter what pains you take in liquefying, the honey will granulate in your customers' hands, and if they do not know how to liquefy it, your trade will suffer. You may as well instruct them properly in the first place.

When Should Bees be Taken from Cellar?—C. Davenport thinks if bees winter well and are nearly dormant they should be left till settled weather; but if restless and uneasy, many leaving their hives and dying, the sooner they are set out the better. If in an intermediate condition, it matters not whether they are taken out in March or April. More stores are consumed if the bees come out early, but they will be stronger for the harvest if early weather is good. If the weather is bad, then those left in the cellar are better off.—Bee-Keepers' Review.

Root's Column

This is a **Queer World**. We cannot be made to see all things alike. Some like one thing, and some another. There is a class, no doubt, who hesitate to try Plain Sections because of the extra expense of the fixtures. There is another class who would not have them anyhow. Well, we are prepared to suit everybody. We have just brought out a slat separator to take the place of the ordinary tin or solid-wood separator.



They are simply four slats bound together at the ends by folded tins. They can be used in any super taking the old-style sections; and their cost is hardly any more than wood separators. We can supply them for 80 cents per 100, either for T supers or for section-holders. For odd-sized supers, of course we shall have to make additional charge. They can be supplied with our regular S super—that is, the supers with old-style sections and section-holders, or with our regular T supers.

Mr. J. E. Crane produced several thousand pounds of honey with separators of this kind, and he is of the opinion that the freer communication afforded gave him fuller and better boxes; but the boxes were hardly as complete and nice as those from fences.

Keep Your Eye on this Column, as we may be able to save you dollars.

The A. I. Root Company
MEDINA, OHIO.

GENERAL ITEMS

Prospects Good for Honey.

According to present indications Southern Indiana; and especially Vanderburgh county, will have a good honey-yield for the season of 1899. We have had the largest rainfall for quite a number of years. A heavy snow falling just immediately before the recent cold wave, when the mercury reached 15 degrees below, saved the most of our young honey-plants from freezing out. I examined and found the roots of the dry weather honey-vine to have withstood the cold weather nicely, thus insuring a bountiful supply of rarest nectar from this source, should the summer be hot enough. However, clover does not look so well, altho it is somewhat early in the season. Large losses of bees are reported all around.

J. C. WALLENMEYER.
Vanderburgh Co., Ind., Feb. 23.

Bees Had Good Flight.

Bees had a good flight Feb. 21. My 34 colonies all seem to be in fair condition. I have thus far lost none.

JOHN STROEBEL, JR.
Saginaw Co., Mich., Feb. 27.

Don't Depend on Neighbors.

I have four colonies of bees. I bought one colony in 1896, and that year they did not get a pound of honey; they would have starved if we had not fed them. The year 1897 we got about 100 pounds, mostly from sweet clover, but some heart's ease. The year 1898 we got 275 pounds. My husband was discouraged; he could not work with the bees, as his work kept him so busy that he had no time to spare. We sent for our neighbor every time there was anything to be done with the bees, so last year I told my husband to send for a veil and smoker, and I would help take care of them myself. This thing of depending on someone else is all nonsense.

We just packed our bees and left them on the summer stands. It is very cold at present—five degrees below zero.

RENA LAFORGE.
Cowley Co., Kans., Feb. 6.

Bees Working Hard.

I have 115 colonies of bees in good shape, and the prospect are for a good year. We are having fine weather. Pussy willows are in bloom, and bees are working hard.

Kings Co., Cal., Jan. 8. B. F. SHIRK.

Doolittle's Funnel for Making Nuclei

What is the size of the bee-funnel recommended by Mr. Doolittle to shake bees into, when making nuclei? What I want are top and bottom dimensions.

J. N. LADENBURGER.

[We referred the above question to Mr. Doolittle, who answers as follows:—ED.]

ANSWER.—I think that the funnels used by the A. I. Root Co., and others, in putting up bees by the pound, were an oblong at the top, the sides being perpendicular till coming near the bottom, when a gradual slant was made till the outlet to the funnel was reached, which outlet should be not less than 2½ inches in diameter, in any funnel made for this purpose. If smaller than this, the bees will clog in this narrow part, when a full frame of them are shaken in at once, a thing which we nearly always want to do.

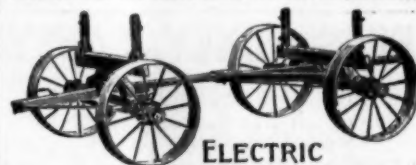
But I had my funnel made the same as an ordinary funnel is made, the top of which was 16 inches in diameter, the sides gradually sloping, at about the angle used in the

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To get new customers to test my seeds I will mail my handsome catalogue for 1899, lithographed and beautifully illustrated, and a 10c. Due Bill, good for 10c. worth of seeds for trial, absolutely free. It is full of bargains. All the Best Seeds, Bulbs, Plants, Roses, new Fruits, Farm Seeds, Potatoes, etc., at lowest prices. Ten Great Novelties offered without names. I will pay \$50. FOR A NAME for each. Don't buy your stock until you see this new catalogue. Several varieties shown in colors. Great inducements for orders this year. You will be surprised at my bargain offers. Send your address on Postal to-day. Tell your friends to send too. Old customers will receive a copy. F. H. MILLS, Seedsman, Box 88, Rose Hill, N. Y. Please mention Bee Journal when writing.

BUY THE BEST.

If you want the best low down wagon you should buy the Electric Handy Wagon. It is the best because it is made of the best material; the best broad tired Electric Wheels; best seasoned white hickory axles; all other wood parts of the best seasoned white oak. The front and rear hounds are made from the best angle steel,



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which is neater, stronger, and in every way better than wood. Well painted in red and varnish. Extra length of reach, and extra long standards supplied without additional cost when requested. This wagon is guaranteed to carry 4,000 pounds anywhere. Write the Electric Wheel Co., Box 16, Quincy, Illinois, for their new catalogue, which fully describes this wagon, their famous Electric Wheels and Electric Feed Cookers.

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Feed the hens on green cut bone. They will lay double the eggs right in the middle of the winter, when eggs are worth most money.

DANDY Green Bone Cutters

with or without gear are the best machines for preparing bone for fowls. Cut fast, turn easy. Catalogue and prices free.

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with fence and plain sections, and a full line of other

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BY STEAM—with the simple, perfect, self-regulating

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Lowest priced 1st-class hatcher made

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For 3-4 Pound at \$3.50 per Gross.

We have on hand a limited supply of tall, straight, white-glass Honey-Jars holding ¾-pound each. They have a tin cap that screws on the glass. They are very attractive for the retail grocery trade. Put up in barrels holding exactly one gross each, f.o.b. Chicago, \$3.50 per gross; 5 gross, \$3.25 per gross. Address,

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It combines the good qualities of all machines and has the fault of none. Our Catalogue and Guide to Poultry Culture tells all about the laws of incubation, and how to raise, feed and market poultry—all about the money end of the business. Contains plans for construction and cost of modern poultry houses and many other things worth knowing. Sent for 10 cts. THE CYPHERS INCUBATOR CO., Box 50, Wayland, N. Y. Please mention Bee Journal when writing.

95% HATCHES



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BEES, HONEY, MONEY

Queens for Business *****
Supplies at Bottom Prices.

"Bee-Keeping for Beginners," price 50 cents, imparts the instruction. Price-List free.

68st J. P. H. BROWN, Augusta, Ga.
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AGRICULTURAL EPI TOMIST.
Sample copy Free to any address upon receipt of name and address plainly written on postal card naming paper in which you saw this ad.

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Modern Farmer and Busy Bee,
the best general FARM and BEE paper in existence. Write for sample copy to-day, and for clubbing rates with any paper you want.

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and send them our incubator on trial. No man should buy an incubator and pay for it before giving it a trial. You pay not a cent for ours until you have given it a thorough trial. It's made so that nobody can fall with it. A child can run it with 5 minutes attention daily. It beat all others at World's Fair, Nashville and Omaha Expositions. The best catalogue and treatise on incubation published, sent for 5 cts. Plans for Brooders, Poultry Houses, etc., sent upon receipt of 25 cts.

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Bee-Hives, Italian Bees

Queens, Sections, Comb Foundation, Bee-Veils, Smokers, Honey-Knives, etc. **SEND FOR ONE.**

Address, **F. A. SNELL,**
1A13t Milledgeville, Carroll Co., Ills.
Please mention Bee Journal when writing.



Please mention Bee Journal when writing.

ordinary small funnel, till they reach the outlet, which was $2\frac{3}{4}$ inches long by $2\frac{3}{4}$ inches in diameter. After it was made I bent the sides in at two opposite points till the top was of an oval shape about 19 inches across the long way by one foot the short way. And this is the only funnel I have ever had or ever seen, and it works completely with either the Gallup or the Langstroth frame, the Langstroth frame being held endwise in the funnel when shaking the bees off the comb. I use this funnel much, in connection with the nucleus-box, and should consider no apiary complete without the funnel and the box, for with them we can make "swarms" or nuclei at our pleasure. G. M. DOOLITTLE.

Wintered Well So Far.

I have been a regular subscriber to the American Bee Journal now for 17 years, besides several copies in the earlier days. My bees have wintered well so far.

EMIL J. BAXTER.

Hancock Co., Ill., Feb. 4.

Fears Loss by the Cold.

Thermometers in this section are indicating from 25 to 30 degrees below zero to-day. I fear my entire apiary will be swept away by the extreme cold, as they were poorly fixt for winter. An early snow and freeze caught me napping. My bees haven't had a good flight for some time. J. M. YOUNG.

Cass Co., Neb., Feb. 11.

A Rather Poor Year for Bees.

We have had a rather poor year for bees in this section of country. I have 45 colonies of bees and only had about 500 pounds of comb honey. My apiary is located on Green River, in McLean Co., Ky., on a bluff about 200 feet above low water mark.

J. W. COLTHARP.

A Queen Experience.

About Nov. 1 I found a colony that had a drone-laying queen—a young queen. She had a deformed wing; in fact, one wing was all twisted up in something like a web, and fully half of the colony were drones, and the comb was full of drone-brood. I killed the queen, and I had a good queen to give them, which I introduced thus:

I take a small piece of screen-wire about 4 inches square, turn down about $\frac{3}{4}$ of an inch all around the edge and insert it in a frame of the drone-brood and honey, and put the queen and a few bees between the comb and the screen. I let her stay there 10 days, at which time I liberated her. When I took the cloth off I found an empty cell had a larva in it. For the first time with me in introducing a queen in that way, the bees immediately killed the queen. The reason I know it was she, her wing was clipped.

Well, I thought them worthless, as there were no drones flying, and no honey or pollen for the bees to get, so, as I thought the colony was no good, I decided to put a new colony in the old hive. So yesterday I cut a fine bee-tree and thought I would burn up this drone colony, take the bees out of the tree and put in it. I hived my bees in a sack, brought them home, and built a fire to burn the drones, as I thought. I began to take out the frames and burn the bees. I burnt those from the first three combs, and to my surprise the fourth comb was well filled with brood and had a nice laying queen on it, and no drones in the hive. Now, how do you account for this queen? Of course she must have been reared from those eggs that were laid by the queen I tried to introduce, and she must have been mated to one of those drones that were laid by the unfertile queen, as there are no drones at this season of the year, only in such a queenless colony. There is no brood here in the hives in November and December.

Will some of the expert bee-keepers tell how that queen was mated? I will be

Improved Farm For Sale

Near the best market and best shipping point in West Michigan. NOW TACKLE THE SUGAR BEET.

A. & O. BAXTER, Muskegon, Mich.
8A5t Please mention the Bee Journal.

PATENT WIRED COMB FOUNDATION

Has no Sag in Brood-Frames.

Thin Flat-Bottom Foundation

Has no Fishbone in the Surplus

Honey.

Being the cleanest is usually workt the quickest of any foundation made.

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Hives, Sections,

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I sell the VERY BEST at lowest prices and ship promptly.

Send me your name for 1899 catalog and prices, whether you are a large or small consumer or dealer.

Beeswax always wanted for cash or trade at the highest price. Address,

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ALBINO QUEENS If you want the most prolific Queens—If you want the gentlest Bees—If you want the best honey-gatherers you ever saw—try my Albino Queens in April, \$1.00; Tested, \$1.50.
9A26t **J. D. GIVENS, LISBON, TEX.**

The "Emerson" Binder.

The Emerson stiff-cloth-board Binder for the American Bee Journal we mail for 60 cents; or will send it with the Journal for one year—both for \$1.50. It is a very fine thing to preserve the copies of the Bee Journal as fast as they are received. If you have the "Emerson" no further binding is necessary.

GEORGE W. YORK & CO.,

118 Michigan Street, - CHICAGO, ILL.



A MINIE-BALL

won't "sweep an avenue," but its screech will call attention. These little ads. may remind you we have larger ammunition for the asking. Write us. **PAGE WOVEN WIRE FENCE CO., ADRIAN, MICH.**

pleased to hear from them, unless she mated with the unfertile queen's drones.

The reason I hive bees out of a tree in a sack is, they are more easily carried out of the mountains. As we often have to carry them miles afoot or on a pack-horse, a hive or box would be too unbandy. The mountains are full of bees. I found five beehives yesterday, and it was too cold for the bees to fly, and the only way I could find them was by knocking on the tree, or blowing in the holes. But it is hard work, as it is so rough and steep. From the tree I cut yesterday I got five gallons of honey and ten pounds of wax.

W. D. JEFFERSON.

Graham Co., Ariz., Jan. 27.

Wintering Well.

Bees have wintered well so far in the cellar. The new department called "The Afterthought" is a great improvement, for I think everyone will enjoy being "rubbed" after a little, after he takes his bee-medicine.

PAUL F. BRATZ.

Waukesha Co., Wis., Feb. 13.

Wintering Well—Prospects Good.

I have 30 colonies of bees in the cellar in good condition. I commenced with 24 colonies last year, spring count, and got only 500 pounds of honey. The prospects for the coming season are good.

RUFUS WILLIAMS.

Lawrence Co., Ind., Feb. 17.

Hard Freeze for Fruit.

We had a hard freeze here the first days of this month, which killed blackberry and raspberry bushes and nearly all larger fruit-buds; also killed a large percent of the prune, pear, and cherry trees. I think the prospect here for honey next summer is slim. This section of the State is not much for honey any year.

C. F. HOLT.

Marion Co., Oreg., Feb. 23.

Fear Winter Losses of Bees.

The recent cold weather (terribly cold weather prevailing here now) will, I fear, work havoc with the bees. Their winter stores are composed mainly of honey-dew and aster honey. The black stuff has a great tendency to sour in the combs, and there is a sticky, nasty oozing out upon the cappings that means almost certain destruction. Our winters here have been so broken that almost any kind of honey would winter bees, tho I much prefer good, well-ripened honey for them.

Scioto Co., O., Feb. 13. W. W. MCNEAL.

Bee Mortality Not Great.

The weather has been very cold for more than two weeks, and bees have not had a flight since about the third week in January. The mercury has been below zero almost or quite every day for the last two weeks. Once it was 28 degrees below. Today it warmed up so that some bees flew at noonday. They made a heroic effort to clear themselves and also to clean house. The mortality does not seem to be great, but I never saw the snow spotted so badly. I am glad to say that the bees from one Tar Heel golden beauty, and one Buckeye State golden beauty, are standing the racket as well as any in the yard. These queens are going through their second winter.

EDWIN BEVINS.

Decatur Co., Iowa, Feb. 14.

Wintering on Honey-Dew.

I send you a small sample of honey-dew for inspection. My bees are wintering finely so far, eating that kind of honey and staying on the summer stands, without any protection except the single-walled hives; no losses up to this date, 90 colonies in all. I took about 4,000 pounds of this sort of honey last year—some 600 pounds of comb

THE HATCHING HEN



Sent on receipt of 10 cents.

HAS LOST HER OCCUPATION and in the production and brooding of chicks she has been supplanted by the better and every way

RELIABLE INCUBATORS and BROODERS.

They Hatch and Brood when you are ready. They don't get lousy. They grow the strongest chicks and the most of them. It takes a 224-page book to tell about these machines and our Mammoth Reliable Poultry Farms. Plans for poultry houses, best way to handle, feed and market fowls, etc.

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We make a specialty of making the very best Sections on the market.

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A beautifully illustrated paper called "The Corn Belt" is published every month and contains a quantity of interesting information about the farm lands west of the Mississippi River. Pictures of all sorts of farm scenes in Iowa, Missouri and Nebraska. Personal experiences of farmers who went to those states from the East years ago. The handsomest farm paper published. Send 25 cents for a year's subscription to THE CORN BELT, 209 Adams St., Chicago.

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I want to purchase bee-hunting boxes, for hunting wild bees. Any one who can supply them, please address, with price, GEO. F. RECORD,

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They have also one of the **LARGEST FACTORIES** and the latest and most improved machinery for the manufacture of **Bee-Hives, Sections, &c.**, that there is in the State. The material is cut from patterns, by machinery, and is absolutely accurate. For Sections, the **clearest and whitest Basswood** is used, and they are polished on both sides. Nearness to Pine and Basswood forests, and possession of mills and factory equip with best machinery, all combine to enable this firm to furnish the **BEST GOODS AT THE LOWEST PRICES.**

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26 cents Cash paid for Beeswax.

This is a good time to send in your Beeswax. We are paying **26 cents a pound—CASH**—upon its receipt. Now, if you want the money **PROMPTLY**, send us your Beeswax. Impure wax not taken at any price. Address as follows, very plainly,

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Write at once for circulars giving further information. Address,

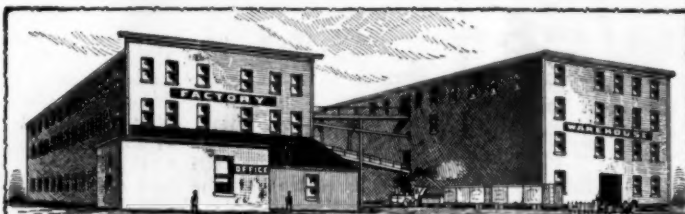
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Smoke Engine (largest smoker made) 4-in. stove. Doz. \$13.00; each, by mail, \$15.00	
Doctor..... 3½ in. stove. Doz. 9.00; " 1.10	
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Large..... 2½ in. stove. Doz. 5.00; " .90	
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Bingham Smokers have all the new improvements. Before buying a Smoker or Knife, look up its record and pedigree.

FIFTEEN YEARS FOR A DOLLAR; ONE-HALF CENT FOR A MONTH.

Dear Sir:—Have used the Conqueror 15 years. I was always pleased with its workings, but thinking I would need a new one this summer, I write for a circular. I do not think the 4-inch Smoke Engine too large.

Truly, W. H. EAGERTY, Cuba, Kansas.

T. F. BINGHAM, Farwell, Michigan.

FOREWARNED IS FOREARMED

Do Not Wait until the last moment to order your Supplies. You may be disappointed by delay in shipment and lose a portion of the honey harvest. **Save money and gain honey** by sending us your estimate NOW. We are offering **Special Inducements for Early Orders**. Our 1899 Catalog free.

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L. C. WOODMAN, Grand Rapids, Mich.

G. B. LEWIS CO.,

Watertown, Wisconsin.

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and the rest extracted. Everybody likes this honey in this part of the country.

This honey was produced by the small white aphidæ or plant-lice, of which there were multiplied millions to be seen on chestnut and oak timber through May and June. July was wet, and that put an end to the little "honey-distiller" for the summer, and that ended the honey-flow until September, when the bees gathered some nectar from the asters. A. J. McBRIDE.

Watauga Co., N. C., Feb. 8.

Weather Severe on Bees.

It is quite severe on bees just now, 32 degrees below zero and growing colder. My bees are in a cellar under the house, where there is no fire. The thermometer indicates 40 degrees; it has been 43 and 44 degrees all along until now. G. H. FREY.

Linn Co., Iowa, Feb. 8.

"Good" Winter Weather.

We are having good winter weather here—now 32 degrees below zero. I am wintering one colony out-of-doors; they will think it a little chilly. I also have 57 colonies in a repository, which are doing nicely at 37 degrees above zero. C. E. TAYLOR.

Ontario, Canada, Feb. 14.

Coldest and Snowiest.

Coldest and most snow here "within the memory of the oldest inhabitant." Would have to dig to find some of my hives. But as I am still shaky from the effects of the grippe, I can't get at them until the cold lets up. THOS. THURLOW.

Lancaster Co., Pa., Feb. 15.

Pretty Cold Weather.

The very cold weather has kept me in the house, where it is warm, but as I have no rest in doing nothing, I have taken all my Bee Journals into the house (which are all bound in yearly bands—my own way) since 1880, wherein I find much, to me now, right and wrong. Some of the ideas and theories almost coax a smile out of a failing human.

For the past ten days it has been from 20 to 40 degrees below, 30 degrees this a.m., 41 above in the bee-house, with a little gas in it. There is eight inches of snow on a level, making fine sleighing since Nov. 23.

C. THEILMANN.

Wabasha Co., Minn., Feb. 13.

Cold Weather—Foul Brood Bill.

I think there will be a demand in this section for "Schmidt's Hardy Bees," if the present cold weather continues very long.

It was 14 degrees below zero yesterday, with a strong wind from the northwest, and it was down to 23 degrees below this morning.

I am writing to our representative today in regard to the Foul Brood Bill which we are interested in at present.

JOHN S. DOWDY.

Logan Co., Ill., Feb. 9.

Best Bee-Winter in Five Years.

As far as I know, this has been the best bee-winter for the five years I have had bees. Steady, moderately cold weather, and for the last 2½ weeks we have had zero weather constantly. Bees did only moderately well last year. Too many sunflowers, from which they gathered very strong and rank amber comb honey, which improves with age and keeps fluid in the combs. D. J. FRASER.

Marion Co., Kans., Feb. 8.

Thinks It Very Cold Weather.

The weather has been very cold so far in February, the thermometer ranging from zero to 10 degrees below, with a piercing northwest wind which drives the cold

through almost everything except the fire. My bees have not had a good cleansing flight since the middle of November. I hardly know what condition they are in. It is too cold to think of opening hives to see, as they were all packed on the summer stands early in the fall, with plenty of good honey, and fairly well protected from the cold winds.

I had a fairly good crop of honey in 1898, mostly from buckwheat, which is all sold at a fair price. FRED E. WHITMORE.
Cayuga Co., N. Y., Feb. 13.

Something to Correct Fermentation

I think that boric acid is what Mr. A. W. Hart, on page 29, refers to, and I think he will find the article in one of the issues of the American Bee Journal of six or eight years ago, if my memory serves me rightly. That will not stop fermentation after it once sets in, but if put in while extracted honey is being cured, according to the article referred to, it will prevent fermentation. Extracted honey improperly cured, or, if properly cured, but stored in a damp place, is almost sure to ferment. The moisture should be well evaporated, and the honey then stored in a dry, warm room, and sealed in air-tight cans or bottles.

I am not acquainted with the chemical properties of this acid; it may, for aught I know, be very poisonous, and require very careful handling. B. A. THOMPSON.
Middlesex Co., Mass.

Cold and Windy Winter.

It is intensely cold, 18 degrees below zero, this forenoon. It has been cold and windy for 10 or 15 days, which makes me hunt the stove. I have 60 colonies in my bee-cellar, snug and warm, and 13 packed out-doors. I believe those in the cellar will come out far the best, as it has been a pretty cold and windy winter. F. C. LEFEVRE.

Adams Co., Nebr., Feb. 9.

Second-Hand 60-pound Cans for Sale Cheap.

We have another lot of about 150 second-hand 60-pound Cans, two in a case, that we offer, while they last, in lots of five or more cases (10 cans) at 40 cents a case, f.o.b. Chicago. They are in good condition. Better order at once if you want some of them. Address,

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And Several Other Clover Seeds.

We have made arrangements so that we can furnish Seed of several of the Clovers by freight



Sweet Clover.

or express, at the following prices, cash with the order:

	5lb	10lb	25lb	50lb
Sweet Clover (mellilot).....	60c	\$1.00	\$2.25	\$4.00
Alsike Clover.....	70c	1.25	3.00	5.75
White Clover.....	80c	1.40	3.00	5.00
Alfalfa Clover.....	60c	1.00	2.25	4.00
Crimson Clover.....	55c	.90	2.00	3.50

Prices subject to market changes.

Add 25 cents to your order, for cartage, if wanted by freight.

Your orders are solicited.

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BEST GOODS AT FAIR PRICES.

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10A1f DES MOINES, IOWA.

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HONEY AND BEESWAX

MARKET QUOTATIONS.

CHICAGO, Feb. 16.—This month trade has been of small volume in comb honey, due perhaps to the extreme cold that has made transportation dangerous, we now look for a better movement; yet the season is drawing to a close, as after the middle of March there is practically none sold until the new harvest is ready.

Fancy grade of white comb, 13c; travel stained and light amber, 11@12c; amber and dark, 8@10c; candied and mixt colors, 6@7c. Extracted, white, 6@7c; amber, 5@6c. Beeswax, 27@28c. R. A. BURNETT & CO.

DETROIT, Jan. 2.—No change in supply of honey as to quality, but prices are somewhat lower than last quotations, viz: Fancy white, 13c; No. 1, 12@12½c; fancy dark and amber, 9@11c. Extracted, white, 6@7c; dark, 5@5½c. Beeswax, 25@26c. M. H. HUNT.]

INDIANAPOLIS, Jan. 4.—Fancy white comb, 12@12½c; No. 1, 10@11c. Demand fairly good. Dark comb honey is being offered at 8@9c with almost no demand. Clover and basswood extracted, 6½@7c. Beeswax, 26@28c. WALTER S. POWDER.

NEW YORK, Jan. 20.—Fancy white, 12c; No. 1 white, 10@11c; amber, 9c; buckwheat and dark, 7c. Extracted is good demand at unchanged prices. Beeswax rather quiet 27@28.

Trade in comb honey is quiet. White is pretty well cleaned up, but there is a large stock of buckwheat, amber and mixt, having accumulated of late, and in order to sell in quantity lots it is necessary to shade quotations.

HILDRETH BROS. & SEGELKEN.

SAN FRANCISCO, Feb. 8.—White comb, 9½@10½c; amber, 7½@9c. Extracted, white, 7@7½c; light amber, 6½@6¾c. Beeswax, 24@27c.

Market is not favorable to buyers, more especially for desirable extracted, stocks of which are decidedly light. Comb is in moderate supply, and has to depend almost wholly on local custom for an outlet. Quotable rates remain as previously given.

BOSTON, Feb. 8.—The demand for comb honey is very light, with full stock on hand. We quote our market: Fancy white, 13@14c; A No. 1, 12c; No. 1, 11@12c; light amber, 9@10c. No demand for buckwheat. Extracted, white Northern stock, 7@8c. Beeswax quiet at 27@28c. BLAKE, SCOTT & LEE.

KANSAS CITY, Jan. 25.—Fancy white comb, 13c; No. 1, 12c; amber, 11c; dark, 10c. Extracted white, 6c; amber, 5c; dark, 4½c. Beeswax, 25c. C. C. CLEMONS & CO.

BUFFALO, Feb. 24.—Closely cleaned up on fancy one-pound combs; such kinds move brisk to-day at about 12 cents. Other grades have cleaned up mostly, but few remaining which are selling at 9c down to 7c. Extracted honey not much used here; stray lots 5@6c. Fancy pure beeswax, 30@33c; common, 22@28c. BATTERSON & CO.

CLEVELAND, Jan. 2.—Fancy white, 13@14c; No. 1 white, 12@13c; A No. 1 amber, 10@11c; No. 2 amber, 9@10c; buckwheat, 8c. Extracted, white, 7c; amber, 6c; buckwheat, 5c. A. B. WILLIAMS & CO.

MILWAUKEE, March 2.—Fancy 1-lb. sections, 13@14c; A No. 1, 12@12½c; No. 1, 11@12c; dark or amber or old, 7@10c. Extracted, in barrels or kegs, white, 7@7½c; dark, 5½@6½c. Beeswax, 25@27c.

Since our last report we have had a very good market for honey, and the demand has been very good for all grades, especially for sections of the best quality, and the demand is good now and small supply. We encourage shipments of best comb. Extracted, fair demand.

A. V. BISHOP & CO.

Convention Notice.

Utah.—The Utah Bee-Keepers' Association will hold their regular semi-annual convention April 8, at 10 o'clock a.m. in the city and county building, Salt Lake City. A full program in the interest of the industry will be presented, and all bee-keepers are cordially invited. Among the subjects to be considered will be the purchasing of supplies, the disposal of our products, and the best method for the protection of the industry. It is desirable to have every county represented, either personally or by letter. Questions are solicited. Mill Creek, Utah. J. B. FAGG, Sec.

Order Early

There are indications that the demand for SUPPLIES will be very large this season, and everyone should order as early as possible. We have large facilities for manufacturing all kinds of

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And will serve our customers as quickly as possible.

Falcon Sections are the Finest Made.

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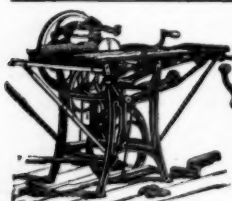
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Liberal Discounts to the Trade.



UNION Combination SAW for ripping, cross-cutting, mitering, rabbeting, grooving, gaining, scroll-sawing, boring, edge-moulding, beading, etc. Full line FOOT and HAND POWER MACHINERY. Send for Catalog A.

Seneca Falls Mfg. Co., 46 Water St., Seneca Falls, N. Y.
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Including their discounts for goods wanted for use another season. It will pay you to send me list of goods wanted. Cash for Beeswax.

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Why does it sell so well?

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Send name for our Catalog, Samples of Foundation and Veil Material. We sell the best Veils, cotton or silk.

Bee-Keepers' Supplies of all Kinds

Langstroth on the Honey-Bee—Revised.

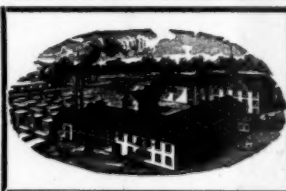
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Beeswax Wanted at all times.

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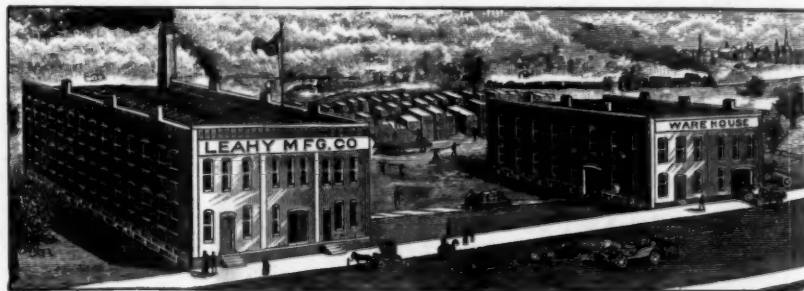
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We also manufacture Tanks of either wood or galvanized steel, all sizes, any form, for all purposes. Price list free.

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HIVES, SECTIONS, COMB-FOUNDATION, SMOKERS,

in fact, nearly everything a bee-keeper needs. We also have at Glen Cove, L.I., two apiaries, and sell from them

ITALIAN BEES AND QUEENS.

Untested Queens, after March 15, 70 cts.; 3 for \$1.80; Tested Queens, \$1.25 each. Colony of Italian Bees with a Tested Queen in a complete Hive, \$7.50. Catalog free. Fertile Eggs from heavy-laying White Wyandots, \$1.00 per 13; \$1.50 per 26.

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